Notice of Allowability	Application No.	Applicant(s)	
	10/644,306	SPRING ET AL.	
	Examiner	Art Unit	
	Craig A. Thompson	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *submission of 8/20/2003*.

2. ☒ The allowed claim(s) is/are *1-24*.

3. ☒ The drawings filed on *20 August 2003* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: prior art of record does not describe or suggest applicants' invention set forth in claims 1-11, a method for manufacturing a MOSgated (MOS gated) device wherein spaced apart insulating bodies are formed of a first thickness over a major surface of a semiconductive body, and insulation layer of a second thickness is formed over a first major surface in areas between the insulating bodies wherein the second thickness is thinner than the first, a gate electrode and a body region are formed, and regions of a first conductivity type are formed in the body regions, in the context of the recited process. Similarly, prior art of record does not describe or suggest the invention of claims 12-22, a method for forming a MOSgated device wherein a body region of a second conductivity type is formed in a semiconductive body of a first type, regions of a second conductivity type are formed in the body regions, each region being spaced apart from the semiconductive body and implanting dopants to form deep junctions, in the context of the recited device. Finally, prior art of record does not describe or suggest the invention os claim 23, a process for manufacturing a MOSFET device wherein a substrate of a first conductivity type is provided having an epitaxial layer of the same conductivity type formed on a top surface thereof, base regions are formed of a second conductivity type in the epitaxial layer, source regions of a first conductivity type are formed in the base regions, and deep junctions of a second conductivity type are formed under the base regions by multiple implants, in the context of the recited process.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Cited Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chang et al (U.S. Patent No. 6,380,569) teaches a method for making a high power unipolar switch (abstract and title). Darwish et al. (U.S. Patent No. 6,008,520) teaches a method for making a trench MOSFET with a heavily doped delta layer to provide low on resistance (abstract and title). Finally, Frisna et al. (U.S. Patent numbers 6,468,866 and 5,985,721) teach methods for making single feature size MOS technology power devices (abstracts and titles).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Thompson whose telephone number is (571)272-1699. The examiner can normally be reached on Monday-Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on (571)272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Craig A. Thompson
Primary Examiner
Art Unit 2813

18 October 2004